WHAT IS CLAIMED IS:

1. A system for controlling true output power of a transmitter, comprising:

a voltage detector in communication with a power amplifier of the transmitter for detecting an output voltage of the power amplifier,

wherein the voltage detector generates a voltage signal that is proportional to the output voltage of the power amplifier,

wherein the voltage detector comprises:

a voltage scaler for scaling the output voltage of the power amplifier; and

a voltage scaling ratio controller for controlling a voltage scaling ratio of the voltage scaler to maintain the voltage signal within a predetermined voltage range;

a current detector in communication with the power amplifier for detecting an output current of the power amplifier,

wherein the current detector generates a current signal that is proportional to the output current of the power amplifier,

wherein the current detector comprises:

a current mirror for mirroring the output current of the power amplifier, wherein the mirrored output current is scaled using a predetermined current scaling ratio;

a power detector in communication with the voltage detector and the current detector for detecting a true output power delivered by the power amplifier,

wherein the power detector comprises a multiplier for multiplying the current signal and the voltage signal to generate a power signal,

wherein the power signal is proportional to the true output power delivered by the power amplifier; and

a power controller in communication with the power detector and the power amplifier for controlling the power amplifier to regulate the true output power delivered by the power amplifier based on the power signal,

wherein the power controller generates a control signal associated with the power signal, and

wherein the control signal is configured to vary the true output power delivered by the power amplifier,

wherein the power controller comprises:

a comparator for comparing the power signal with at least one predetermined threshold,

wherein the power controller generates the control signal based upon the comparison of the power signal with the at least one predetermined threshold.

2. The system of claim 1, wherein the voltage signal comprises a fundamental frequency component of the output voltage of the power amplifier, wherein the current signal comprises a fundamental frequency component of the output current of the power amplifier, and wherein the power signal comprises a DC power signal.

3. The system of claim 1, wherein the voltage scaler comprises a voltage divider.

4. The system of claim 3, wherein the voltage divider comprises a capacitive voltage divider.

5. The system of claim 1, wherein the voltage scaling ratio controller sets the voltage scaling ratio of the voltage scaler based upon a predetermined target output power of the power amplifier.

6. The system of claim 1, wherein the at least one predetermined threshold comprises a first predetermined threshold and a second predetermined threshold,

wherein the first predetermined threshold is greater than the second predetermined threshold, and

wherein the control signal is configured to cause the true output power of the power amplifier to decrease when the power signal exceeds the first predetermined threshold and configured to cause the true output power of the power amplifier to increase when the power signal is less than the second predetermined threshold.

7. The system of claim 1, wherein the at least one predetermined threshold comprises a first predetermined threshold, and

wherein the control signal is configured to cause the true output power of the power amplifier to decrease when the power signal exceeds the first predetermined threshold and configured to cause the true output power of the power amplifier to increase when the power signal is less than the first predetermined threshold.

8. The system of claim 1, wherein the multiplier comprises a linear multiplier.

9. The system of claim 8, wherein the linear multiplier comprises a Gilbert-cell multiplier.

10. The system of claim 1, wherein at least the power controller and the power amplifier are formed on a monolithic substrate.

11. The system of claim 10, wherein the voltage detector, the current detector and the power detector are formed on the monolithic substrate.

12. The system of claim 1, wherein the power amplifier comprises at least the power controller.

13. The system of claim 12, wherein the power amplifier further comprises the voltage detector, the current detector and the power detector.

14. The system of claim 1, wherein the system comprises a transmitter portion of a transceiver.

15. The system of claim 1, wherein the system is compliant with a standard selected from the group consisting of 802.11, 802.11a, 802.11b and 802.11g.

16. A system for controlling true output power of a transmitter, comprising:

a voltage detector means in communication with a power amplifier of the transmitter for detecting an output voltage of the power amplifier,

wherein the voltage detector means generates a voltage signal that is proportional to the output voltage of the power amplifier,

wherein the voltage detector means comprises:

a voltage scaler means for scaling the output voltage of the power amplifier; and

a voltage scaling ratio controller means for controlling a voltage scaling ratio of the voltage scaler means to maintain the voltage signal within a predetermined voltage range;

a current detector means in communication with the power amplifier for detecting an output current of the power amplifier,

wherein the current detector means generates a current signal that is proportional to the output current of the power amplifier,

wherein the current detector means comprises:

a current mirror means for mirroring the output current of the power amplifier, wherein the mirrored output current is scaled using a predetermined current scaling ratio;

a power detector means in communication with the voltage detector means and the current detector means for detecting a true output power delivered by the power amplifier,

wherein the power detector means comprises a multiplier means for multiplying the current signal and the voltage signal to generate a power signal,

wherein the power signal is proportional to the true output power delivered by the power amplifier; and

a power controller means in communication with the power detector means and the power amplifier for controlling the power amplifier to regulate the true output power delivered by the power amplifier based on the power signal,

wherein the power controller means generates a control signal associated with the power signal, and

wherein the control signal is configured to vary the true output power delivered by the power amplifier,

wherein the power controller means comprises:

a comparator means for comparing the power signal with at least one predetermined threshold,

wherein the power controller means generates the control signal based upon the comparison of the power signal with the at least one predetermined threshold.

17. The system of claim 16, wherein the voltage signal comprises a fundamental frequency component of the output voltage of the power amplifier, wherein the current signal comprises a fundamental frequency component of the output current of the power amplifier, and wherein the power signal comprises a DC power signal.

18. The system of claim 16, wherein the voltage scaler means comprises a voltage divider means.

19. The system of claim 18, wherein the voltage divider means comprises a capacitive voltage divider means.

20. The system of claim 16, wherein the voltage scaling ratio controller means sets the voltage scaling ratio of the voltage scaler means based upon a predetermined target output power of the power amplifier.

21. The system of claim 16, wherein the at least one predetermined threshold comprises a first predetermined threshold and a second predetermined threshold,

wherein the first predetermined threshold is greater than the second predetermined threshold, and

wherein the control signal is configured to cause the true output power of the power amplifier to decrease when the power signal exceeds the first predetermined threshold and configured to cause the true output power of the power amplifier to increase when the power signal is less than the second predetermined threshold.

22. The system of claim 16, wherein the at least one predetermined threshold comprises a first predetermined threshold, and

wherein the control signal is configured to cause the true output power of the power amplifier to decrease when the power signal exceeds the first predetermined threshold and configured to cause the true output power of the power amplifier to increase when the power signal is less than the first predetermined threshold.

23. The system of claim 16, wherein the multiplier means comprises a linear multiplier means.

24. The system of claim 23, wherein the linear multiplier means comprises a Gilbert-cell multiplier means.

25. The system of claim 16, wherein at least the power controller means and the power amplifier are formed on a monolithic substrate.

26. The system of claim 25, wherein the voltage detector means, the current detector means and the power detector means are formed on the monolithic substrate.

27. The system of claim 16, wherein the power amplifier comprises at least the power controller means.

28. The system of claim 27, wherein the power amplifier further comprises the voltage detector means, the current detector means and the power detector means.

29. The system of claim 16, wherein the system comprises a transmitter portion of a transceiver means.

30. The system of claim 16, wherein the system is compliant with a standard selected from the group consisting of 802.11, 802.11a, 802.11b and 802.11g.

31. A system for controlling true output power of a transmitter, comprising:

a voltage detector in communication with a power amplifier of the transmitter for detecting an output voltage of the power amplifier,

wherein the voltage detector generates a voltage signal that is proportional to the output voltage of the power amplifier;

a current detector in communication with the power amplifier for detecting an output current of the power amplifier,

wherein the current detector generates a current signal that is proportional to the output current of the power amplifier;

a power detector in communication with the voltage detector and the current detector for detecting a true output power delivered by the power amplifier,

wherein the power detector comprises a multiplier for multiplying the current signal and the voltage signal to generate a power signal,

wherein the power signal is proportional to the true output power delivered by the power amplifier; and

a power controller in communication with the power detector and the power amplifier for controlling the power amplifier to regulate the true output power delivered by the power amplifier based on the power signal.

32. The system of claim 31, wherein the voltage signal comprises a fundamental frequency component of the output voltage of the power amplifier, wherein the current signal comprises a fundamental frequency component of the output current of the power amplifier, and wherein the power signal comprises a DC power signal.

33. The system of claim 31, wherein the voltage detector comprises a voltage scaler for scaling the output voltage of the power amplifier.

34. The system of claim 33, wherein the voltage scaler comprises a voltage divider.

35. The system of claim 34, wherein the voltage divider comprises a capacitive voltage divider.

36. The system of claim 33, comprising:

a voltage scaling ratio controller in communication with the voltage detector for controlling a voltage scaling ratio of the voltage scaler , to maintain the voltage signal within a predetermined voltage range.

37. The system of claim 36, wherein the voltage scaling ratio controller sets the voltage scaling ratio of the voltage scaler based upon a predetermined target output power of the power amplifier.

38. The system of claim 31, wherein the current detector comprises a current mirror for mirroring the output current of the power amplifier, and

wherein the mirrored output current is scaled using a predetermined current scaling ratio.

39. The system of claim 31, wherein the multiplier comprises a linear multiplier.

40. The system of claim 39, wherein the linear multiplier comprises a Gilbert-cell multiplier.

41. The system of claim 31, wherein the power controller generates a control signal associated with the power signal, and

wherein the control signal is configured to vary the true output power delivered by the power amplifier.

42. The system of claim 41, wherein the power controller comprises:

a comparator for comparing the power signal with at least one predetermined threshold,

wherein the power controller generates the control signal based upon the comparison of the power signal with the at least one predetermined threshold.

43. The system of claim 42, wherein the at least one predetermined threshold comprises a first predetermined threshold and a second predetermined threshold,

wherein the first predetermined threshold is greater than the second predetermined threshold, and

wherein the control signal is configured to cause the true output power of the power amplifier to decrease when the power signal exceeds the first predetermined threshold and configured to cause the true output power of the power amplifier to increase when the power signal is less than the second predetermined threshold.

44. The system of claim 42, wherein the at least one predetermined threshold comprises a first predetermined threshold, and

wherein the control signal is configured to cause the true output power of the power amplifier to decrease when the power signal exceeds the first predetermined threshold and configured to cause the true output power of the power amplifier to increase when the power signal is less than the first predetermined threshold.

45. The system of claim 31, wherein at least the power controller and the power amplifier are formed on a monolithic substrate.

46. The system of claim 45, wherein the voltage detector, the current detector and the power detector are formed on the monolithic substrate.

47. The system of claim 31, wherein the power amplifier comprises at least the power controller.

48. The system of claim 47, wherein the power amplifier further comprises the voltage detector, the current detector and the power detector.

49. The system of claim 31, wherein the system comprises a transmitter portion of a transceiver.

50. The system of claim 31, wherein the system is compliant with a standard selected from the group consisting of 802.11, 802.11a, 802.11b and 802.11g.

51. A system for controlling true output power of a transmitter means, comprising:

a voltage detector means in communication with a power amplifier means of the transmitter means for detecting an output voltage of the power amplifier means,

wherein the voltage detector means generates a voltage signal that is proportional to the output voltage of the power amplifier means;

a current detector means in communication with the power amplifier means for detecting an output current of the power amplifier means,

wherein the current detector means generates a current signal that is proportional to the output current of the power amplifier means;

a power detector means in communication with the voltage detector means and the current detector means for detecting a true output power delivered by the power amplifier means,

wherein the power detector means comprises a multiplier means for multiplying the current signal and the voltage signal to generate a power signal,

wherein the power signal is proportional to the true output power delivered by the power amplifier means; and

a power controller means in communication with the power detector means and the power amplifier means for controlling the power amplifier means to regulate the true output power delivered by the power amplifier means based on the power signal.

52. The system of claim 51, wherein the voltage signal comprises a fundamental frequency component of the output voltage of the power amplifier means, wherein the current signal comprises a fundamental frequency component of the output current of the power amplifier means, and wherein the power signal comprises a DC power signal.

53. The system of claim 51, wherein voltage detector means comprises a voltage scaler means for scaling the output voltage of the power amplifier means.

54. The system of claim 53, wherein the voltage scaler means comprises a voltage divider means.

55. The system of claim 54, wherein the voltage divider means comprises a capacitive voltage divider means.

56. The system of claim 53, comprising:

a voltage scaling ratio controller means in communication with the voltage detector means for controlling a voltage scaling ratio of the voltage scaler means, to maintain the voltage signal within a predetermined voltage range.

57. The system of claim 56, wherein the voltage scaling ratio controller means sets the voltage scaling ratio of the voltage scaler means based upon a predetermined target output power of the power amplifier means.

58. The system of claim 51, wherein the current detector means comprises a current mirror means for mirroring the output current of the power amplifier means, and

wherein the mirrored output current is scaled using a predetermined current scaling ratio.

59. The system of claim 51, wherein the multiplier means comprises a linear multiplier means.

60. The system of claim 59, wherein the linear multiplier means comprises a Gilbert-cell multiplier means.

61. The system of claim 51, wherein the power controller means generates a control signal associated with the power signal, and

wherein the control signal is configured to vary the true output power delivered by the power amplifier means.

62. The system of claim 61, wherein the power controller means comprises:

a comparator means for comparing the power signal with at least one predetermined threshold,

wherein the power controller means generates the control signal based upon the comparison of the power signal with the at least one predetermined threshold.

63. The system of claim 62, wherein the at least one predetermined threshold comprises a first predetermined threshold and a second predetermined threshold,

wherein the first predetermined threshold is greater than the second predetermined threshold, and

wherein the control signal is configured to cause the true output power of the power amplifier means to decrease when the power signal exceeds the first predetermined threshold and configured to cause the true output power of the power amplifier means to increase when the power signal is less than the second predetermined threshold.

64. The system of claim 62, wherein the at least one predetermined threshold comprises a first predetermined threshold, and

wherein the control signal is configured to cause the true output power of the power amplifier means to decrease when the power signal exceeds the first predetermined threshold and configured to cause the true output power of the power amplifier means to increase when the power signal is less than the first predetermined threshold.

65. The system of claim 51, wherein at least the power controller means and the power amplifier means are formed on a monolithic substrate.

66. The system of claim 65, wherein the voltage detector means, the current detector means and the power detector means are formed on the monolithic substrate.

67. The system of claim 51, wherein the power amplifier means comprises at least the power controller means.

68. The system of claim 67, wherein the power amplifier means further comprises the voltage detector means, the current detector means and the power detector means.

69. The system of claim 51, wherein the system comprises a transmitter portion of a transceiver means.

70. The system of claim 51, wherein the system is compliant with a standard selected from the group consisting of 802.11, 802.11a, 802.11b and 802.11g.

71. A method of controlling true output power of a transmitter, comprising the steps of:

providing:

a voltage detector in communication with a power amplifier of the transmitter;

a current detector in communication with the power amplifier;

a power detector in communication with the voltage detector and the current detector,

wherein the power detector comprises a multiplier; and

a power controller in communication with the power detector and the power amplifier;

detecting an output voltage of the power amplifier using the voltage detector;

generating a voltage signal using the voltage detector,

wherein the voltage signal is proportional to the output voltage of the power amplifier;

detecting an output current of the power amplifier using the current detector;

generating a current signal using the current detector,

wherein the current signal is proportional to the output current of the power amplifier;

detecting a true output power delivered by the power amplifier using the power detector,

wherein the multiplier of the power detector multiplies the current signal and the voltage signal to generate a power signal that is proportional to the true output power delivered by the power amplifier; and

controlling the power amplifier using the power controller to regulate the true output power delivered by the power amplifier based on the power signal.

72. The method of claim 71, wherein the voltage signal comprises a fundamental frequency component of the output voltage of the power amplifier,

wherein the current signal comprises a fundamental frequency component of the output current of the power amplifier, and wherein the power signal comprises a DC power signal.

73. The method of claim 71, wherein the step of detecting an output voltage comprises the steps of:

providing:

a voltage scaler in communication with the voltage detector; and

scaling the output voltage of the power amplifier using the voltage scaler.

74. The method of claim 73, wherein the voltage scaler includes a voltage divider.

75. The method of claim 74, wherein the voltage divider includes a capacitive voltage divider.

76. The method of claim 73, wherein the step of scaling the output voltage comprises the steps of:

providing:

a voltage scaling ratio controller in communication with the voltage detector; and

controlling a voltage scaling ratio of the voltage scaler using the voltage scaling ratio controller, to maintain the voltage signal within a predetermined voltage range.

77. The method of claim 76, wherein the step of controlling the voltage scaling ratio of the voltage scaler comprises the steps of:

setting the voltage scaling ratio of the voltage scaler based upon a predetermined target output power of the power amplifier.

78. The method of claim 71, wherein the step of detecting an output current comprises the steps of:

providing:

a current mirror in communication with the current detector; and

mirroring the output current of the power amplifier using the current mirror,

wherein the mirrored output current is scaled using a predetermined current scaling ratio.

79. The method of claim 71, wherein the multiplier includes a linear multiplier.

80. The method of claim 79, wherein the linear multiplier includes a Gilbert-cell multiplier.

81. The method of claim 71, wherein the step of controlling the power amplifier comprises the steps of:

generating a control signal associated with the power signal using the power controller; and

varying the true output power delivered by the power amplifier using the control signal.

82. The method of claim 81, wherein the step of generating a control signal comprises the steps of:

providing:

a comparator in communication with the power controller;

comparing the power signal with at least one predetermined threshold using the comparator; and

generating the control signal using the power controller based upon the comparison of the power signal with the at least one predetermined threshold.

83. The method of claim 82, wherein the at least one predetermined threshold comprises a first predetermined threshold and a second predetermined threshold,

wherein the first predetermined threshold is greater than the second predetermined threshold, and

wherein the step of varying comprises the steps of:

decreasing the true output power of the power amplifier using the control signal, when the power signal exceeds the first predetermined threshold; and

increasing the true output power of the power amplifier using the control signal, when the power signal is less than the second predetermined threshold.

84. The method of claim 82, wherein the at least one predetermined threshold comprises a first predetermined threshold, and

wherein the step of varying comprises the steps of:

decreasing the true output power of the power amplifier using the control signal, when the power signal exceeds the first predetermined threshold; and

increasing the true output power of the power amplifier using the control signal, when the power signal is less than the first predetermined threshold.

85. The method of claim 71, wherein at least the power controller and the power amplifier are formed on a monolithic substrate.

86. The method of claim 85, wherein the voltage detector, the current detector and the power detector are formed on the monolithic substrate.

87. The method of claim 71, wherein the power amplifier includes at least the power controller.

88. The method of claim 87, wherein the power amplifier further includes the voltage detector, the current detector and the power detector.

89. The method of claim 71, wherein the method is compliant with a standard selected from the group consisting of 802.11, 802.11a, 802.11b and 802.11g.

90. A method of controlling true output power of a transmitter, comprising the steps of:

monitoring an output voltage of a power amplifier of the transmitter;

producing a voltage signal that is proportional to the output voltage of the power amplifier;

monitoring an output current of the power amplifier;

producing a current signal that is proportional to the output current of the power amplifier;

multiplying the current signal and the voltage signal to generate a power signal,

wherein the power signal is proportional to a true output power delivered by the power amplifier; and

controlling the power amplifier to regulate the true output power delivered by the power amplifier based on the power signal.

91. The method of claim 90, wherein the voltage signal comprises a fundamental frequency component of the output voltage of the power amplifier, wherein the current signal comprises a fundamental frequency component of the output current of the power amplifier, and wherein the power signal comprises a DC power signal.

92. The method of claim 90, wherein the step of monitoring the output voltage comprises the step of:

scaling the output voltage of the power amplifier.

93. The method of claim 92, wherein the step of scaling the output voltage comprises the step of:

controlling the scaling of the output voltage to maintain the voltage signal within a predetermined voltage range.

94. The method of claim 93, wherein the step of controlling the scaling of the output voltage comprises the steps of:

setting the scaling of the output voltage based upon a predetermined target output power of the power amplifier.

95. The method of claim 90, wherein the step of monitoring an output current comprises the step of:

mirroring the output current of the power amplifier,

wherein the mirrored output current is scaled using a predetermined current scaling ratio.

96. The method of claim 90, wherein the step of controlling the power amplifier comprises the steps of:

generating a control signal associated with the power signal; and

varying the true output power delivered by the power amplifier using the control signal.

97. The method of claim 96, wherein the step of generating the control signal comprises the step of:

comparing the power signal with at least one predetermined threshold,

wherein the control signal is generated based upon the comparison of the power signal with the at least one predetermined threshold.

98. The method of claim 97, wherein the at least one predetermined threshold comprises a first predetermined threshold and a second predetermined threshold,

wherein the first predetermined threshold is greater than the second predetermined threshold, and

wherein the step of varying comprises the steps of:

decreasing the true output power of the power amplifier using the control signal, when the power signal exceeds the first predetermined threshold; and

increasing the true output power of the power amplifier using the control signal, when the power signal is less than the second predetermined threshold.

99. The method of claim 97, wherein the at least one predetermined threshold comprises a first predetermined threshold, and

wherein the step of varying comprises the steps of:

decreasing the true output power of the power amplifier using the control signal, when the power signal exceeds the first predetermined threshold; and

increasing the true output power of the power amplifier using the control signal, when the power signal is less than the first predetermined threshold.

100. The method of claim 90, wherein the method is compliant with a standard selected from the group consisting of 802.11, 802.11a, 802.11b and 802.11g.

101. A system for controlling true output power of a transmitter, comprising:

means for monitoring an output voltage of a power amplifier of the transmitter;

means for producing a voltage signal that is proportional to the output voltage of the power amplifier;

means for monitoring an output current of the power amplifier;

means for producing a current signal that is proportional to the output current of the power amplifier;

means for multiplying the current signal and the voltage signal to generate a power signal,

wherein the power signal is proportional to a true output power delivered by the power amplifier; and

means for controlling the power amplifier to regulate the true output power delivered by the power amplifier based on the power signal.

102. The system of claim 101, wherein the voltage signal comprises a fundamental frequency component of the output voltage of the power amplifier, wherein the current signal comprises a fundamental frequency component of the output current of the power amplifier, and wherein the power signal comprises a DC power signal.

103. The system of claim 101, wherein the means for monitoring the output voltage comprises:

means for scaling the output voltage of the power amplifier.

104. The system of claim 103, wherein the means for scaling the output voltage comprises:

means for controlling the scaling of the output voltage to maintain the voltage signal within a predetermined voltage range.

105. The system of claim 104, wherein the means for controlling the scaling of the output voltage comprises:

means for setting the scaling of the output voltage based upon a predetermined target output power of the power amplifier.

106. The system of claim 101, wherein the means for monitoring an output current comprises:

means for mirroring the output current of the power amplifier,

wherein the mirrored output current is scaled using a predetermined current scaling ratio.

107. The system of claim 101, wherein the means for controlling the power amplifier comprises:

means for generating a control signal associated with the power signal; and

means for varying the true output power delivered by the power amplifier using the control signal.

108. The system of claim 107, wherein the means for generating the control signal comprises:

means for comparing the power signal with at least one predetermined threshold,

wherein the means for generating the control signal generates the control signal based upon the comparison of the power signal with the at least one predetermined threshold.

109. The system of claim 108, wherein the at least one predetermined threshold comprises a first predetermined threshold and a second predetermined threshold,

wherein the first predetermined threshold is greater than the second predetermined threshold, and

wherein the means for varying comprises:

means for decreasing the true output power of the power amplifier using the control signal, when the power signal exceeds the first predetermined threshold; and

means for increasing the true output power of the power amplifier using the control signal, when the power signal is less than the second predetermined threshold.

110. The system of claim 108, wherein the at least one predetermined threshold comprises a first predetermined threshold, and

wherein the means for varying comprises:

means for decreasing the true output power of the power amplifier using the control signal, when the power signal exceeds the first predetermined threshold; and

means for increasing the true output power of the power amplifier using the control signal, when the power signal is less than the first predetermined threshold.

111. The system of claim 101, wherein at least the means for controlling the power amplifier and the power amplifier are formed on a monolithic substrate.

112. The system of claim 111, wherein the means for monitoring the output voltage, the means for producing the voltage signal, the means for monitoring the

output current, the means for producing the current signal and the means for multiplying are formed on the monolithic substrate.

113. The system of claim 101, wherein the power amplifier comprises at least the means for controlling the power amplifier.

114. The system of claim 113, wherein the power amplifier further comprises the means for monitoring the output voltage, the means for producing the voltage signal, the means for monitoring the output current, the means for producing the current signal and the means for multiplying.

115. The system of claim 101, wherein the system comprises a transmitter portion of a transceiver means.

116. The system of claim 101, wherein the system is compliant with a standard selected from the group consisting of 802.11, 802.11a, 802.11b and 802.11g.

117. A computer program for controlling true output power of a transmitter by performing the steps of:

monitoring an output voltage of a power amplifier of the transmitter;

producing a voltage signal that is proportional to the output voltage of the power amplifier;

monitoring an output current of the power amplifier;

producing a current signal that is proportional to the output current of the power amplifier;

multiplying the current signal and the voltage signal to generate a power signal,

wherein the power signal is proportional to a true output power delivered by the power amplifier; and

controlling the power amplifier to regulate the true output power delivered by the power amplifier based on the power signal.

118. The computer program of claim 117, wherein the voltage signal comprises a fundamental frequency component of the output voltage of the power amplifier, wherein the current signal comprises a fundamental frequency component of the output current of the power amplifier, and wherein the power signal comprises a DC power signal.

119. The computer program of claim 117, wherein for the step of monitoring the output voltage, the computer program performs the step of:

controlling the scaling of the output voltage to maintain the voltage signal within a predetermined voltage range.

120. The computer program of claim 119, wherein for the step of controlling the scaling of the output voltage, the computer program performs the steps of:

setting the scaling of the output voltage based upon a predetermined target output power of the power amplifier.

121. The computer program of claim 117, wherein for the step of monitoring an output current, the computer program performs the step of:

mirroring the output current of the power amplifier,

wherein the mirrored output current is scaled using a predetermined current scaling ratio.

122. The computer program of claim 117, wherein for the step of controlling the power amplifier, the computer program performs the steps of:

generating a control signal associated with the power signal; and

varying the true output power delivered by the power amplifier using the control signal.

123. The computer program of claim 122, wherein for the step of generating the control signal, the computer program performs the step of:

comparing the power signal with at least one predetermined threshold,

wherein the control signal is generated based on a comparison of the power signal with the at least one predetermined threshold.

124. The computer program of claim 123, wherein the at least one predetermined threshold comprises a first predetermined threshold and a second predetermined threshold,

wherein the first predetermined threshold is greater than the second predetermined threshold, and

wherein for the step of varying, the computer program performs the steps of:

decreasing the true output power of the power amplifier using the control signal, when the power signal exceeds the first predetermined threshold; and

increasing the true output power of the power amplifier using the control signal, when the power signal is less than the second predetermined threshold.

125. The computer program of claim 123, wherein the at least one predetermined threshold comprises a first predetermined threshold, and

wherein for the step of varying, the computer program performs the steps of:

decreasing the true output power of the power amplifier using the control signal, when the power signal exceeds the first predetermined threshold; and

increasing the true output power of the power amplifier using the control signal, when the power signal is less than the first predetermined threshold.